Attorney's Docket No. 018987-030

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	) **MAIL STOP NON-FEE**
	) **AMENDMENT**
Nobuhiro MISHIMA	)
	) Group Art Unit: 2623
Application No.: 09/756,924	)
	) Examiner: Jingge Wu
Filed: January 10, 2001	)
	) Confirmation No.: 6342
For: CODER, CODING METHOD,	)
PROGRAM, AND IMAGE	)
FORMING APPARATUS FOR	)
IMPROVING IMAGE DATA	)
COMPRESSION RATIO	)

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APR 0 6 2004

Technology Center 2600

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

The Examiner is thanked for the careful examination of the application. However, in view of the following remarks, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections.

Claims 1, 2, 4-7, 10, 24, and 26 have been rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 5,881,173, hereinafter *Ohmori*.

Claim 1 defines a coder comprising an obtaining unit that obtains a predetermined amount of image data in which each pixel is expressed by a plurality of bits. The coder also includes a developing unit that develops the pieces of bit data in the image data on virtual planes, wherein pieces of bit data of the same pixel are developed on the same virtual plane. And, the coder includes a coding unit that performs entropy coding on the developed bit data in the virtual plane units.

For purposes of example, and not to limit the present invention to the disclosed embodiments, the Examiner's attention is directed to the disclosed embodiments for an explanation of claim 1. Specifically, an example of the developing unit of claim 1

corresponds to the two-dimensional development processing unit 102 that is illustrated in Figure 3. The two-dimensional development processing unit converts image data, such as that illustrated in Figure 1A or Figure 5A to a format such as is illustrated in Figure 5B. In the illustrated embodiment, the developing unit 102 converts the data into virtual planes, as is illustrated in Figure 5B. In Figure 5B, a single virtual plane includes several bits for each pixel. See, e.g., wherein bits 7, 6, 5, and 4 for pixel D00 are illustrated in the first row. Thus, as set forth in claim 1, "pieces of bit data of the same pixel are developed on the same virtual plane." In contrast, in the bit plane format as seen in Fig. 1B, only one piece of bit data for each pixel is arranged on a single bit plane. See, e.g., column 1, lines 47-50 of *Ohmori*, wherein it explains that the eighth bit of each pixel is arranged in bit plane BP8, the seventh bit of each pixel is arranged in BP7, etc.

In making the rejection, the Examiner alleges that the "bit plane generating unit 2" of *Ohmori* develops the image data on virtual planes, wherein the pieces of bit data on the same pixel are developed on the same virtual plane. The Examiner then makes reference to Figures 8 and 9. However, Figures 8 and 9 illustrate bit planes, wherein only one piece of bit data for each pixel is arranged on any given bit plane. Accordingly, the bit planes disclosed by *Ohmori* are different than the virtual planes of claim 1, wherein pieces of bit data of the same pixel are developed on the same virtual plane.

Accordingly, *Ohmori* does not teach or suggest the combination of claim 1, which includes a developing unit that develops the pieces of bit data in the image data on virtual planes, wherein pieces of bit data of the same pixel are developed on the same virtual plane.

Accordingly, claim 1 is clearly patentable over *Ohmori*.

Claims 2 and 4-7 depend from claim 1, and are thus patentable over *Ohmori* at least for the reasons set forth above with respect to claim 1.

Claim 10 defines a coding method combination which includes, among other elements, a developing step for developing the pieces of bit data in the image data on virtual planes, wherein pieces of bit data of the same pixel are developed on the same

virtual plane. Accordingly, claim 10 is also patentable over *Ohmori* at least for the reasons set forth above with respect to claim 1.

Claim 24 defines an image forming apparatus that includes, among other elements, a developing unit that develops the pieces of bit data in the image data on virtual planes, wherein pieces of bit data of the same pixel are developed on the same virtual plane. Accordingly, claim 24 is also patentable over *Ohmori* at least for the reasons set forth above with respect to claim 1.

Claim 26 defines a computer program that performs coding processing of image data which has a computer execute steps, including, a developing step for developing on virtual planes pieces of bit data in image data, in which each pixel is expressed by a plurality of bits, wherein pieces of bit data of the same pixel are developed on the same virtual plane. Accordingly, claim 26 is also patentable over *Ohmori* at least for the reasons set forth above with respect to claim 1.

Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over *Ohmori*. However, claim 3 depends from claim 1, and is thus patentable over *Ohmori* at least for the reasons set forth above with respect to claim 1.

Accordingly, for the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-7, 10, 24, and 26.

In the event that there are any questions concerning this response, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: __4-1-04__   By: _William C. Rowland_
                          William C. Rowland
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AMENDMENT/REPLY TRANSMITTAL LETTER

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Sir:

Enclosed is a reply for the above-identified patent application.

[ ] A Petition for Extension of Time is also enclosed.

[ ] A Terminal Disclaimer and the [ ] $55.00 (2814) [ ] $110.00 (1814) fee due under 37 C.F.R. § 1.20(d) are also enclosed.

[ ] Also enclosed is/are _____.

[ ] Small entity status is hereby claimed.

[ ] Applicant(s) requests continued examination under 37 C.F.R. § 1.114 and enclose the [ ] $385.00 (2801) [ ] $770.00 (1801) fee due under 37 C.F.R. § 1.17(e).

    [ ] Applicant(s) requests that any previously unentered after final amendments <u>not</u> be entered. Continued examination is requested based on the enclosed documents identified above.

    [ ] Applicant(s) previously submitted __, on __, for which continued examination is requested.

    [ ] Applicant(s) requests suspension of action by the Office until at least __, which does not exceed three months from the filing of this RCE, in accordance with 37 C.F.R. § 1.103(c). The required fee under 37 C.F.R. § 1.17(i) is enclosed.

(10/03)

[ ] A Request for Entry and Consideration of Submission under 37 C.F.R. § 1.129(a)
(1809/2809) is also enclosed.

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[X] No additional claim fee is required.

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[ ] An additional claim fee is required, and is calculated as shown below:

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AMENDED CLAIMS					
	NO. OF CLAIMS	HIGHEST NO. OF CLAIMS PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	ADD'L FEE
Total Claims		MINUS =		× $18.00 (1202) =	
Independent Claims		MINUS =		× $86.00 (1201) =	
If Amendment adds multiple dependent claims, add $290.00 (1203)					
Total Claim Amendment Fee					
If small entity status is claimed, subtract 50% of Total Claim Amendment Fee					
TOTAL ADDITIONAL CLAIM FEE DUE FOR THIS AMENDMENT					

[ ] A check in the amount of $_____ is enclosed for the fee due.

[ ] Charge $_____ to Deposit Account No. 02-4800.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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(10/03)